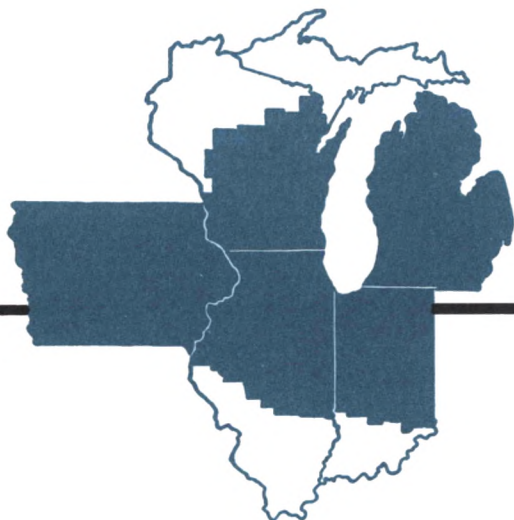


Business Conditions

1968 April



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THE Trend OF BUSINESS

Retail sales strengthen

Retail sales have apparently broken out of the sluggish trend of 1967. Combined, sales for January and February were up 6.4 percent from a year before—almost as much as the increase in personal income. Preliminary data suggest the stronger trend continued in March. This represented a considerable change from last year when personal income after income taxes rose 7.1 percent but consumer purchases of goods rose only 4.2 percent. In 1965 and 1966, consumer purchases rose slightly more than spendable income.

On an annual rate basis, retail sales in January and February combined were up about 12 percent from sales for November-December. Part of the upsurge reflects greater availability of new passenger cars. In late 1967, dealer supplies of new cars were restricted by major strikes that had reduced output in the September-November period. But this is not the whole story. Sales of general merchandise stores and apparel stores were especially strong in February. Sales of important types of household durables, including color television sets, furniture, laundry equipment, refrigerators, and ranges, also improved.

At the beginning of the year, there was widespread scepticism about prospects for retail sales. Surveys of consumer buying intentions in late 1967 had shown plans to reduce purchases of durable goods and indicated generally uneasy attitudes toward economic

conditions in the new year. Price inflation, the proposed tax increase, and uncertainties related to the war were expected to cause consumers to defer buying and to continue rapidly building their reserves of cash and other liquid assets. But employment and income have risen vigorously since then, most goods have been in ample supply, and consumer credit has been readily available. This combination of circumstances normally boosts retail sales.

Income and outlays

Since the Korean War, consumers have spent 94 percent of their average annual after-tax income on goods and services and saved 6 percent. During those years, consumer spending varied annually only from about 93 to 95 percent. Although the range in the spending ratio appears narrow, small changes have heavy impacts on savings and can have marked effects on the general tempo of economic activity.

Savings amounted to 7.1 percent of after-tax income in 1967, compared with less than 6 percent in 1965 and 1966. Changes between quarters were even more pronounced.

The savings rate reached an abnormally high 7.5 percent in the fourth quarter of 1967, mainly because of shortages of new cars and the accompanying small use of consumer credit. If the savings rate in the fourth quarter had been 5.7 percent (the average

for the 1960s), consumer spending would have been about \$10 billion higher on an annual rate basis. Because outlays on services follow a fairly smooth upward trend, higher spending would have been largely on goods, especially durable goods.

Appreciable shifts in the spending-saving relationship between one or two quarters have occurred frequently in the postwar period. The result has usually been involuntary increases or decreases in inventories of manufacturers and distributors. Attempts of retailers and wholesalers to adjust to changes in demand have been reflected in changes in orders to suppliers, followed by changes in production and employment. The savings rate rose from 5.7 percent in the third quarter of 1966 to 7.3 percent in the first quarter of 1967. Increased consumer saving was an important factor in the inventory adjustment of

the first half of 1967 that was accompanied by a decline in industrial production and a temporary cessation of growth for the entire economy.

Contributing to the boom

Even with consumer purchases picking up in the first quarter of 1968, the ratio of savings to income probably remained well above the average for recent years. Consumers, therefore, retain the potential to increase spending still further, especially if they choose to use credit more freely.

Recent doubts about the momentum of the uptrend in the economy have been based partly on the expectation that the restrained growth of consumer spending for goods in the last half of 1967 would continue. Developments in early 1968 appear to require modification of this view.

Trade up last year, but surplus down

This country's merchandise trade with other countries reached another new high last year. Exports, not counting shipments under military grant-aid programs, climbed 5.3 percent to \$30.9 billion, while imports rose 5.0 percent to \$26.8 billion. This resulted in an increase in the gross merchandise trade surplus from \$3.8 billion in 1966 to \$4.1 billion in 1967.

But when export sales under Department of Defense contracts with other governments are excluded and the balance is computed on

the same basis as the U. S. international payments accounts, the trade surplus is shown to have declined from \$3.7 billion in 1966 to \$3.6 billion in 1967.

And when shipments made under government aid programs are subtracted and the surplus is computed on the basis of purely commercial transactions, the surplus shrinks to a mere \$700 million—a considerable decline from \$3.9 billion in 1964.

These developments raise some fundamental questions about the position of the

United States in world trade. What are the causes of this recent unsatisfactory performance? Has the competitive position of the United States been weakening?

Cyclical factors dominate

It is increasingly apparent that many unfavorable developments of recent years can be traced largely to cyclical developments here and abroad. Overheating of the U. S. economy in 1966 attracted large amounts of imports to supplement strained productive resources. Imports rose 20 percent that year, resulting in a sharp deterioration in the U. S. trade balance.¹

Arrivals of foreign goods slowed in the first half of 1967 as the pace of economic activity here relaxed. As industrial production declined (about 4.7 percent in the first half), so did imports of many materials used by U. S. industry. At the same time, imports of capital equipment, which had more than doubled in 1966, leveled off as the surge in expenditures for new plant and equipment declined. Also, imports of consumer goods were restrained by reduced buoyancy in consumer expenditures. After increasing 34 percent in 1966, imports of consumer goods rose in the first half of 1967 at an annual rate of only 6 percent.

With continued moderate advances in exports, the decline in imports in the first half led to sizable improvements in the U. S. balance of trade. In the second quarter, the trade surplus was running at the seasonally adjusted annual rate of \$4.6 billion—an \$800 million increase over the same period a year before.

A turnabout in the second half

The pace of economic activity in the

¹See "The Diminishing Trade Surplus," *Business Conditions*, January 1967.

United States accelerated in the second half of 1967. This, with strikes and threatened strikes in important industries, resulted in a sharp reversal of trends set in the first half. Preliminary figures for the fourth quarter indicate a dramatic change in the declining trend in imports that prevailed through the first part of the year. Total merchandise imports ran 8 percent higher than in the third quarter, reaching a record seasonally adjusted annual rate of \$28.4 billion.

The rise in imports coincided with a decline in exports. After the strong upturn in the first quarter, exports leveled off in the second, began to decline in the third, and dropped sharply in the fourth. This development can be attributed largely to the reassertion of unfavorable conditions in the markets for U. S. goods abroad. The weakening of economic activity in several important European countries in the first part of the year reduced demand for imports from the United States. The reduction in demand was obscured at first by sharp increases in U. S. exports to Japan and Canada. Subsequent declines in exports to Latin America and Asia more than offset these increases, however. With rising imports,

U. S. exports to many European countries level off in 1967

	Exports, 1967 (millions)	Change	
		First half 1966- first half 1967 (percent)	1966-67
Western Europe	\$10,099	*	3
West Germany	1,706	*	2
France	1,025	10	2
Italy	973	4	7
United Kingdom	1,960	9	13
Sweden	385	*	8
Japan	\$ 2,696	20	14
Canada	\$ 7,173	12	8
Latin America	\$ 4,126	1	-3

*Less than 1 percent.

SOURCE: U. S. Department of Commerce.

the U. S. balance of trade deteriorated sharply in the fourth quarter. This turnabout not only offset a large part of the gains early in the year but raised critical questions about future trends.

Long-run competitiveness

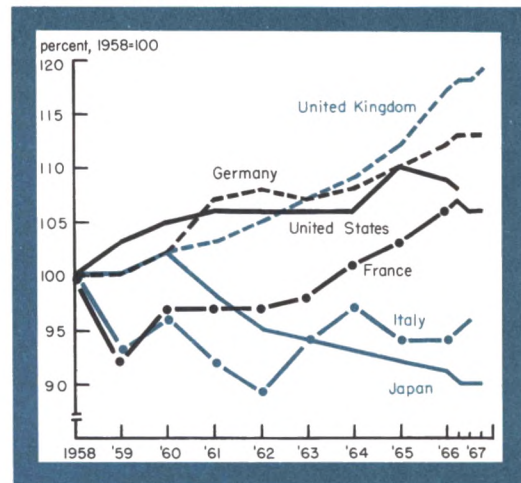
Current evidence indicates that recent developments in U. S. trade accounts can be attributed largely to cyclical crosscurrents running through the economies of the world. The evidence begs a more fundamental question, however: can the unfavorable trend in U. S. trade accounts be reversed—assuming appropriate stabilization policies are used here and abroad? Or, will the ability of the United States to compete in world markets be more or less permanently impaired?

The answers are not easy. Competitiveness in international trade is hard to determine. Buyers' decisions are influenced by many factors, including price developments, technological changes, and the introduction of new products—all of which affect a country's competitiveness and all of which are hard to measure with precision.

Evidence seems to indicate no fundamental shift in the competitive position of the United States. After four years of stability, prices of U. S. manufactured exports rose sharply in 1965. Since then, the prices have been declining steadily, however, and in the second quarter of 1967, the index had dropped back to the same level as in 1964. Over the same period, from 1961 to 1967, prices of manufactured goods shipped by this country's principal competitors, the United Kingdom, Germany, and France, were rising. On the basis of prices, the United States appears to have been in a strengthening position.

But movements of price indexes of exported goods are only one factor in considerations of competitiveness. Such movements

Export prices of U. S. manufacturers rose sharply in 1965



SOURCE FOR CHARTS: The National Institute of Economic and Social Research, England.

merely measure price changes of goods from countries already established as international sellers. Equally important are movements in domestic price-cost relationships. Changes in these relationships can allow a country to gain competitively in world markets by exporting products it did not formerly sell. Changes in such factors as productivity, labor costs, and wholesale prices bear importantly on a country's competitive standing.

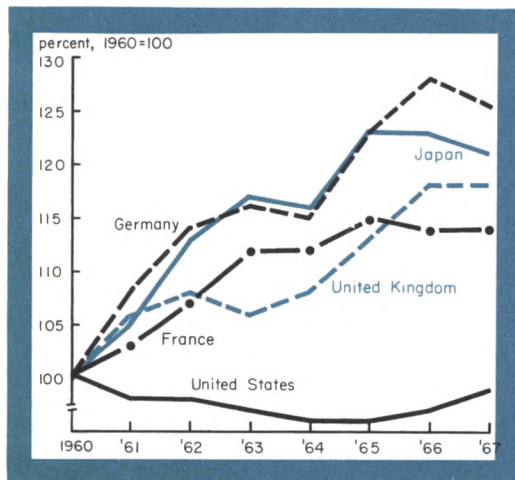
Trends in these factors have also favored the United States. Despite a reversal in the declining trend in 1966, wage-costs per unit of manufacturing output were lower in the United States in 1967 than in 1960. During that time, wage-costs per unit increased considerably in other countries. Cost developments in this country have caused wholesale prices to increase less here in the past six years than in other countries.

The general competitiveness of U. S. exports is further indicated by the relative stability of this country's share of world ex-

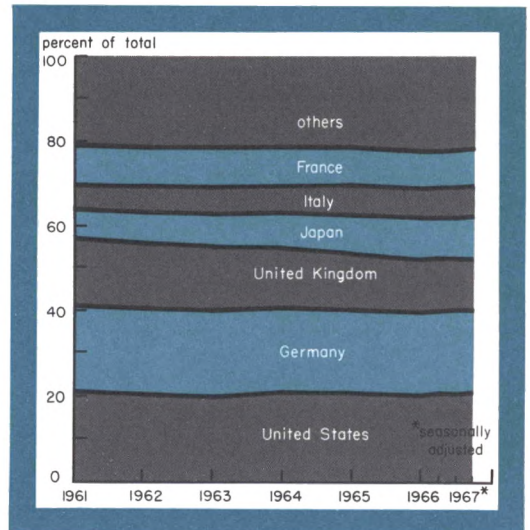
ports. Between 1959 and 1964, the share was almost constant at 17.4 percent. It dropped to 16.6 percent in 1965 and remained close to that ratio in 1966. But in the first half of 1967, it rose again to 17 percent. While the U. S. share in the export of manufactured goods declined slightly over the last seven years, the decline cannot be ascribed to a fundamental loss of competitiveness. The decline was more likely caused by other developments, such as the formation of the European Common Market and subsequent increases in tariff-free trade within the Common Market area.

However, recent cyclical crosscurrents in world economics have left marks on the competitive positions of different countries. The decline in U. S. wage-costs per unit of output and the stability of U. S. wholesale prices were upset in 1966, and both costs and prices continued to rise in 1967. With a slowdown in the economic activity of some countries

Declining trend in U. S. wage costs per unit of output reversed in 1966



U. S. share of world exports of manufactured goods rose in first half of 1967



(such as West Germany), wholesale prices in those countries leveled off, or even declined. The future competitive position of the United States was also adversely affected by devaluation of the British pound and by increases in the export rebates and import taxes in several European countries that changed their tax systems.

All these developments, unless offset or reversed, could affect the competitive position of the United States in world trade and the balance in this country's trade accounts. Changes resulting from these developments are still too uncertain for use in explaining this country's unsatisfactory performance in world trade last year.

What then can be said about prospects for U. S. trade in the future? There are probably changes at work that would contribute to increases in U. S. exports. With intensification of the efforts of several countries to restore

vigor to their economies, reversals in recent downtrends in their prices and costs seem likely, as do increases in their imports. Moreover, to help the United States with its balance of payments, some countries may advance the date for tariff reductions agreed upon in the recent Kennedy Round negotia-

tions. Any significant improvement in the U. S. trade balance, however, will depend largely on this country's ability to control domestic pressures that in the past two years have led to both cyclical and secular developments unfavorable to its position in international trade.

The high cost of living higher

Living costs for a family of four more than doubled between 1951 and 1966, according to the Bureau of Labor Statistics. The rise—from an average of \$4,200 in 1951 to \$9,200 in 1966—partly reflects the rise in prices of goods and services and partly reflects the rise in such other outlays as income taxes and Social Security payments. Contrary to popular impressions, however, the most important factor contributing to higher living costs has been the advance in the standard of living.

The standard of living

The idea of a standard of living is widely accepted, but it is hard to define and harder to measure. It involves personal goals, tastes, and spending habits, all of which vary widely with incomes, different families with the same income, and the same family at different times in its life cycle. There is no simple yardstick with which to measure it.

The Bureau of Labor Statistics describes standard of living in terms of the “quantities and qualities of goods and services required to satisfy prevailing standards of what is necessary for health, efficiency, the nurture of children, and for participation in community activities.” The cost estimates developed by the bureau are, therefore, well above the

“subsistence” level and well below the “luxury” level. In the words of the bureau, they describe a “modest but adequate” standard of living.

Standards of living change. “Cost of living” estimates prepared at different times do not represent the same standard, nor the same concept of adequacy. The bureau’s estimates undertake to represent changes in the living costs, including the change in a moderate standard of living, of a particular category of families.

Budgets are estimated for a hypothetical family of four: a father aged 38, his homemaker wife, and two children in public schools, a son 13 and a daughter 8. This family has characteristics representative of a statistical “middle” group. The group, however, embraces only a small segment of the nation’s total population. Moreover, levels of living differ within the group.

The quantities of items making up a moderate standard of living for such a family are estimated for some 40 key cities, including all the large cities and some small and middle-size ones. The standardized lists of items are built up from studies of nutritional and housing needs and surveys of actual family expenditures and then priced for each city.

Changes in quality often elusive

There can be continuous shifts in the character of items constituting the “modest but adequate” standard. Like the concept of standard of living itself, shifts that come with improvements or deteriorations in the quality of products or services defy precise measurement. The washing machine priced for the 1966 budget, for example, was a fully automatic model rather than the wringer-type commonly used before the mid-1950s. Similarly, the family car was greatly changed. The quality of clothing had changed, especially with the development of wash and wear fabrics. In many respects, quality changes are

a matter of judgment, which varies with individuals.

Changes in items

Many changes in the standard of living are readily observed. The bureau’s list in 1966 included, for example, a lawn mower and in some places an air conditioner for the home, neither of which were in the 1951 budget. Other readily apparent shifts included the rise in ownership of homes and increased use of private, rather than public, transportation. The bureau estimated that in 1951 urban families of four typically lived in rented dwellings. By 1966, a large proportion of

A note on the measurement of living costs

The standard lists of items used in estimating the cost of living were developed for only three years, 1946-47, 1959, and 1966. Similar procedures were used in developing all three lists. The Bureau of Labor Statistics computed its 1951 estimate of the cost of living for a hypothetical urban family of four by applying 1951 prices to the types and amounts of goods and services constituting a “modest but adequate” standard of living in the years before World War II. These lists had been determined from studies of health and nutritional standards and from surveys of consumer expenditures in 1934-36 and 1941. Pricing of the budget annually was discontinued after 1951.

The second revised list reflected the extensive changes in patterns of consumer spending in the 1950s. This list was priced in only one year, 1959. The bureau’s recently released estimates for 1966 are based on a variety of information, including surveys of

consumer expenditures in 1960-61.

The bureau’s estimates of the cost of living are useful, primarily to indicate differences in the cost of a roughly comparable standard of living in different cities and to reflect changes over a length of time.

The bureau also publishes an index of consumer prices, which is often confused with its cost of living estimates. This index provides a comprehensive measure of price movements in goods and services commonly bought by urban wage earners and clerical workers. The bureau obtains quarterly, and to some extent monthly, price quotations for a “market basket” of about 400 goods and services. The weights given each item are adjusted on the basis of special studies and surveys about every ten years. Current weights are based on surveys of consumer purchases in 1960-61. The information covers prices in 56 urban areas, with separate reports issued for 25 of the larger ones.

such families lived in suburbs and 75 percent were homeowners. Nearly all such families owned an automobile, the main exceptions being families in very large cities, such as New York and Chicago, and even there 80 percent owned cars.

With the advent of television and an ever broadening array of other household appliances, the bureau's hypothetical family used more electricity—1,800 kilowatt-hours in 1966, compared with 1,200 in 1951. Use of such services as those provided by laundrettes and beauty shops also increased. The reading and recreational component of the budget included phonographs and phonograph records in 1966, and pets and pet supplies, as well as such previously listed items as books, magazines, and radios. The number of doctors' house calls declined, but office visits and clinical examinations greatly increased, as did visits to dentists.

Living standards have been upgraded in all categories of family spending. The bureau estimates, for example, that the consumption of meat, poultry, and fish doubled, partly at the expense of potatoes and dairy products. More meals were bought away from home—partly because of hot-lunch programs at schools and improved lunch services at factories. The upgrading of clothing was evident in more varied wardrobes and improved quality of apparel.

All these changes reflect the effects of many economic and social changes. Workers' vacations are longer, allowing more leisure time. Educational advancement has changed concepts of what is proper for adequate living. City life has exposed individuals to a greater variety of living standards. But behind these changes has been sustained growth in personal income and the development of new and improved goods and services.

The bureau estimated that for the 18 cities

Annual cost of moderate standard of living for an urban family of four

	1951	1966*
Total cost	\$4,200	\$9,191
Taxes	8%	15%
Gifts and contributions		3
Life insurance and occupational expenses	5	3
Goods and services	87	80
Food	32	23
Housing	19	24
Clothing and personal care		11
Transportation	36	9
Medical care		5
Recreation		8

*Includes both homeowning and renting families.

Note: The data for 1951 are based on 18 cities. Data for 1966 include these 18 plus 22 more. Living cost in the 18 cities averaged \$9,283 in 1966.

included in both the 1951 and 1966 budgets, about 60 percent of the increase in expenditures for goods and services consumed by the family was caused by the greater quantities and varieties of items purchased and about 40 percent was caused by increased prices. The increase in expenditures for such goods and services—from roughly \$3,750 to \$7,650—constitutes, in turn, about three-fourths of the overall rise in living costs.

Prices have risen more for services than for goods, but expenditures, nevertheless, have risen more rapidly for services than goods, indicating a strong association between demand for services and the rise in standards of living and personal income.

Higher standards also contributed to the rise in such other "costs" as gifts to friends, contributions to churches and charities, life insurance, and occupational expenses such as union dues. These outlays, including those for taxes, totaled about \$1,600 in 1966—20 percent of the family budget—and more than

three times the outlay in 1951. In that year such expenditures were less than \$500—about 13 percent of the budget.

In 1966, about a fourth of the budget went for food, and another fourth for housing. Together, clothing, transportation, and medical care accounted for another fourth. The outlay for the husband's clothing was \$174 for the year and for the wife's \$187. The remaining fourth went primarily for taxes, but also included \$361 for such items as education and recreation.

Regional and family differences

The size of the budget varied with the family's location. In 1951, the cost of the moderate standard of living ranged from \$3,812 in New Orleans to \$4,454 in Washington, D. C. Since then, the differential has widened as the cost of living rose in all cities. In 1966, it ranged from \$7,855 in small southern cities to \$10,195 in New York. The more than \$2,000 increase in the spread between the highest and lowest cost areas was caused almost entirely by differences in the rates of increase in prices and taxes in different cities.

Climate accounts for much of the difference in the kinds and amounts of items making up a "modest but adequate" standard in different areas. Regional food preferences and the availability of public transportation are also important factors. Smaller amounts of certain kinds of foods are required for a "nutritionally adequate" diet in the South than elsewhere. People travel much more by public transit in Boston, Chicago, New York, and Philadelphia

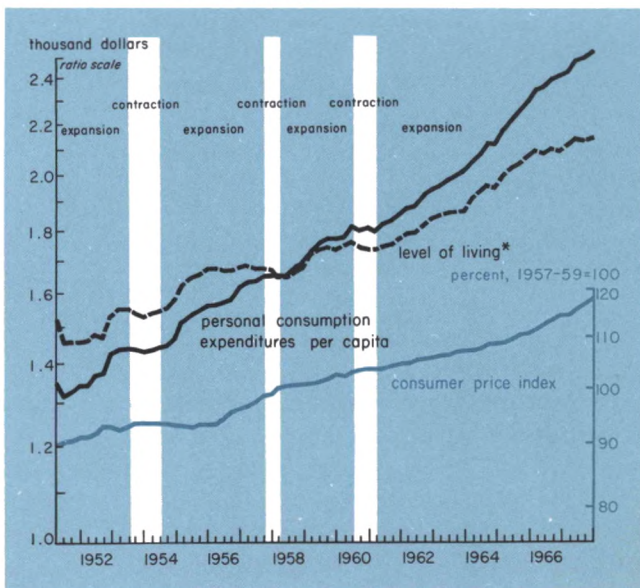
than in other large cities. The kinds and quantities of goods purchased in different cities have tended toward greater uniformity, but the shift has not been marked.

Impact of price change

The 1966 list was only the third the bureau had prepared and the second since 1951. A rough approximation of the rise in living standards between 1951 and 1966 can also be obtained by another means, but not with the same results. Movements in the bureau's consumer price index (often incorrectly called "the cost of living index") can be compared with changes in the nation's personal consumption expenditures for goods and services, as estimated by the Department of Commerce.

The consumer price index is a measure of

Prices are up, but so is the level of living



*Personal consumption expenditures per head deflated by consumer price index.

changes in the prices of a standardized list of goods and services purchased by urban wage earners and clerical workers. The index was 25 percent higher in 1966 than in 1951. Personal expenditures on goods and services estimated by the Department of Commerce for the entire population rose from \$1,337 per capita in 1951 to \$2,366 in 1966—an increase of \$1,029 for the average person.

Adjusted for the rise in prices, this increase in expenditures implies about a 40-percent gain in the broad overall average level of living, compared with the bureau's estimate of a 60-percent gain for its urban family of four. Two factors contributing to the difference highlight the problems in measuring increases in expenditures and consumption.

- Because the consumer price index is intended to measure changes in prices, not consumption, the bureau tries to keep constant the list of goods and services it uses in computing the index. For that reason, the index may be a more reliable indicator of price changes than the cost of living estimate.

- The segments of population used in the two approaches are different, both for measuring changes in prices and for measuring

changes in expenditures.

Regardless of the difference in the two results, however, both substantiate the general view that significant advances have been made in the standard of living and that these advances have been considerably higher than the rise in prices.

Prices and per-capita expenditures have both gone up continuously, but at varying rates. Shortly after the outbreak of the Korean War in 1950, quantities of goods and services purchased per-capita rose rapidly. Since 1951, however, the biggest advances in living standards have been made when the economy was growing rapidly and defense requirements were modest. Such periods often encompass rises in employment and personal income, and relatively stable prices.

Per-capita expenditures rose 4 percent in 1967, the smallest increase since 1963. The consumer price index rose nearly 3 percent in 1967, the same as in 1966 but much more than the average increase of 1.3 percent from 1958 to 1965. Reflecting the strong rise in prices and increases in defense spending, the level of living advanced less in 1967 than in any other year since 1961.

Trends in the Midwest —

Manufacturing in upswing

Manufacturing is on the upswing again in the Seventh Federal Reserve District after only modest gains posted for most of 1967. The upturn is reflected in indexes of manufacturing activity compiled for the district's 12 principal centers of manufacturing.

Last year was unusual for several centers. For Chicago, Detroit, and Indianapolis, it

was the first year since 1960 that manufacturing activity had not increased. For Milwaukee, Grand Rapids, and Battle Creek, it showed the least gain in seven years. Only for Racine and Saginaw was the rate of increase greater than the year before.

Declines in the manufacture of durable goods accounted for most of the slowdown.

Production of equipment tapered off in the early months of 1967, following the rapid expansion of business expenditures for new plant and equipment in 1965 and 1966. The massive accumulation of inventories in 1966 and the subsequent adjustment of 1967 were also largely in producer goods. The slump in automobiles extended the adjustment to consumer durables.

The indexes used in comparing manufacturing activity are based on electric power consumption by large manufacturing plants. Similarities of movements in power consumption and manufacturing output indicate that changes in power consumption can be used as an indicator of short-term changes in industrial production.

Electric power data used in computing indexes of manufacturing activity were adjusted for seasonal variations and for industry-to-industry differences in the value of output per unit of power consumed. These adjustments made possible the combination of indexes of manufacturing industries into comprehensive indexes for each center.

The five states of the Seventh Federal Reserve District—Illinois, Indiana, Iowa, Michigan, and Wisconsin—turn out 23 percent of the nation's manufactured products. Within the district, the 12 centers for which indexes of manufacturing activity were developed account for nearly 60 percent of the manufacturing output.

District manufacturing is heavily weighted with the production of durable goods. Of total district output, almost 69 percent is in durables. Particularly important to the district are primary and fabricated metals, machinery, and transportation equipment. Together, these products account for almost three-fourths of the durable goods produced in the district. Because companies producing these goods are the nation's chief sources of producers' durable equipment, the prosperity of the district is strongly influenced by business expenditures for new plant and equipment.

Of the remaining 31 percent of the district's manufacturing taken up by nondurable goods, food products and chemicals account

Interruptions in activity

Indexes of manufacturing activity based on industrial consumption of electric power reflect the responses of a variety of products and industries to general economic conditions. In the recessions of 1958 and 1960, for example, activity in centers emphasizing the production of nondurable goods tended to decline less than centers producing durable goods.

The indexes also reflect local interruptions in activity. The steel strike in the fall of 1959 is a case in point. Pronounced effects of the strike can be seen in the indexes of manu-

facturing activity for the Seventh District's leading steel centers, Chicago and the Gary-Hammond-East Chicago area. Strikes in the auto industry in the fall of 1964 and again in 1967 curtailed activity in Detroit and other centers with large assembly plants. Civil disturbances in the summer of 1967 curtailed activity in Detroit and Milwaukee. Other disturbances, such as a heavy snowstorm in Chicago in the winter of 1967, can also be detected. Regular seasonal changes, however, are eliminated from the indexes by appropriate statistical techniques.

for more than half. Both industries are closely related to agriculture, either as a source of supply or a market for products.

In Michigan, autos and . . .

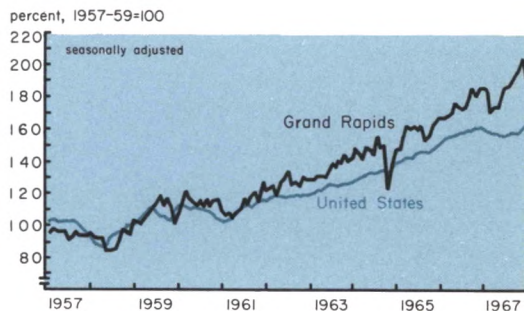
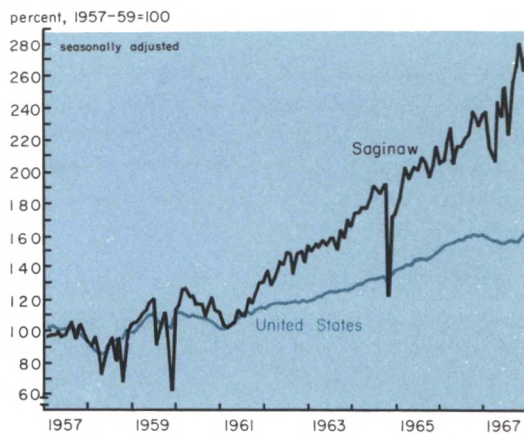
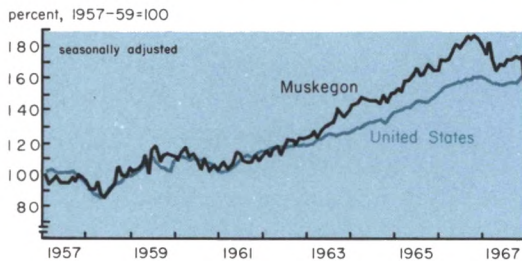
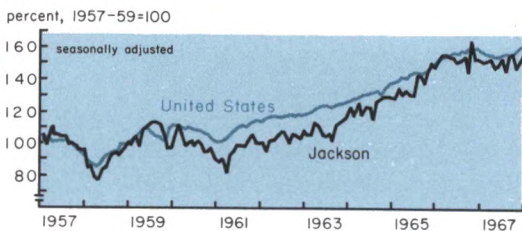
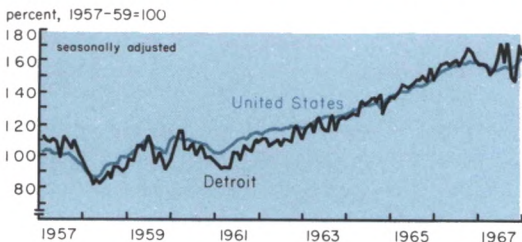
Manufacturing has grown faster in Detroit, Grand Rapids, Jackson, Muskegon, and Saginaw than in the United States as a whole—more than 7 percent a year between 1960 and 1966, compared with more than 6 percent for the nation. This high growth rate can be attributed largely to increases in the production of automobiles and related equipment. Production of nondurable goods, which ac-

counts for about a fifth of the manufacturing activity in these five centers, has not increased as fast as the production of durable goods.

Michigan produces 40 percent of the nation's motor vehicles and equipment and more than a third of the district's durable goods. The auto industry accounts directly for 39 percent of the state's manufacturing, and indirectly for far more. Large amounts of tools and materials used in the production and assembly of motor vehicles are produced in the state.

The auto industry tends to be strongly cyclical. Auto production declined far more

Manufacturing renews expansion begun in 1961
. . . in Detroit, Jackson, Saginaw, and Grand Rapids



than other forms of manufacturing during the recessions of 1958 and 1960, for example.

Battle Creek and Kalamazoo lagged behind the other five centers, averaging a 6-percent annual increase. Both areas produce large amounts of nondurables. More than 40 percent of Battle Creek's manufacturing output is in food products, and almost 60 percent of Kalamazoo's manufacturing is in chemicals and paper products.

While nondurables have not grown as fast as durables, the growth has been more stable. This is reflected in greater stability of manufacturing activity in Battle Creek and Kalamazoo than in other Michigan centers.

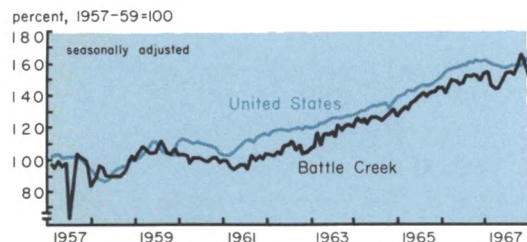
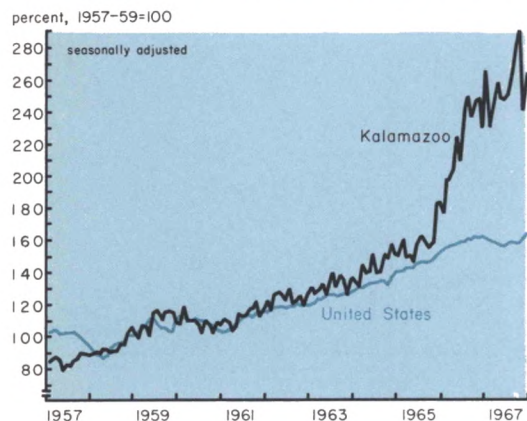
In Battle Creek between 1960 and 1966, manufacturing of food products increased

about 5.5 percent a year. During that time, the production of durable goods, which is oriented largely to the auto industry, grew faster than nondurables. The production of durable goods did not grow as fast in Battle Creek, however, as in other Michigan centers.

The slower increase in activity in Kalamazoo can be attributed partly to the prominence of its paper product industry, where production increased an average of 6 percent a year. It can also be attributed partly to the fabricated metal industry, which has not expanded there significantly.

Chemical production rose faster in Kalamazoo than durable goods—about 13 percent a year. With increased production of motor vehicles and equipment, however, the output of durable goods has increased since late 1965.

. . . in Kalamazoo and Battle Creek



In Indiana, steel and . . .

Indianapolis and the Gary-Hammond-East Chicago area together account for almost 40 percent of the manufacturing output of Indiana. Between 1960 and 1966, manufacturing in Indianapolis increased at an average annual rate of 7 percent. Activity in the Gary-Hammond-East Chicago area increased at a rate of 4.5 percent—the slowest rate of the 12 district centers.

The slow growth of manufacturing in the Gary-Hammond-East Chicago area can be attributed primarily to the slow growth of its secondary industries—chemicals, petroleum, and fabricated metals. Activity in its leading industry—steel and other primary metals—increased about 6.4 percent a year.

Primary metals account for 60 percent of the total manufacturing output of the Gary-Hammond-East Chicago area. The area's production of these metals—which account for 7 percent of the nation's total—increased faster than production in Chicago, Detroit, or

Milwaukee, all of which have substantial steel producing facilities.

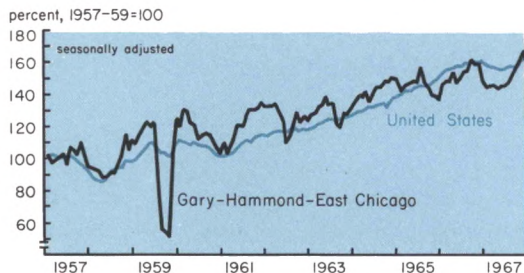
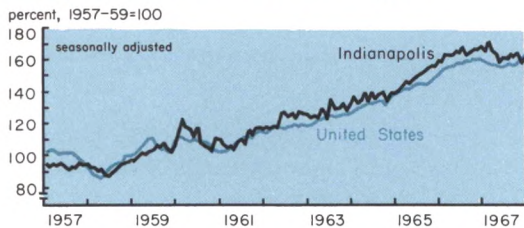
Throughout the district, steel production has increased less rapidly than manufacturing activity overall, reflecting largely the introduction of substitutes for steel and increased competition from foreign suppliers.

A variety of manufacturing activities are carried on in Indianapolis—in both durables and nondurables. Chemicals and automobiles account for almost half the activity there.

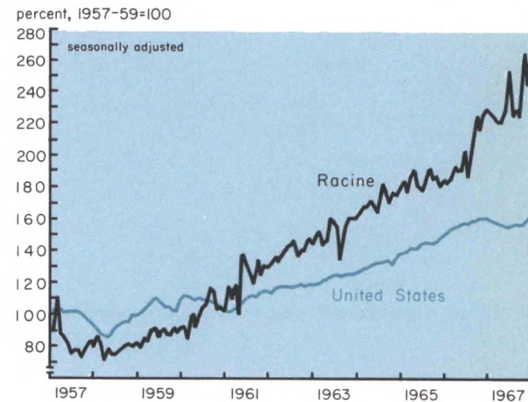
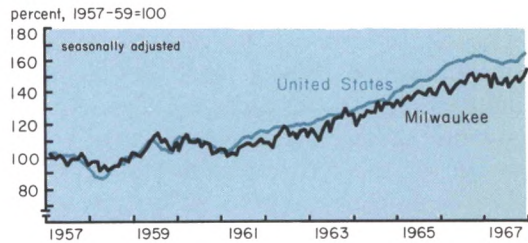
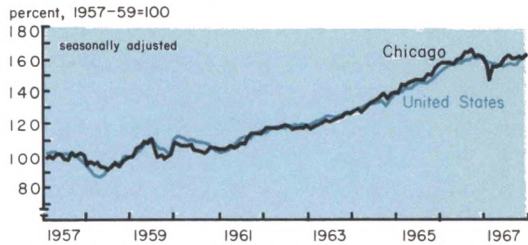
Indianapolis and the Gary-Hammond-East Chicago area fell behind the national growth rate in chemicals, as did Detroit. Together, these three centers account for more than 20 percent of the chemical production in Seventh District states. In Chicago, on the other hand, where more than 30 percent of the chemical output of the five states originates, activity in chemicals has increased faster than in the nation as a whole.

The auto industry, which accounts for a

... in Indianapolis and Gary-Hammond-East Chicago



... in Chicago, Milwaukee, and Racine



fourth of the manufacturing in Indianapolis, has followed much the same pattern of activity there as in the auto centers of Michigan. In Indianapolis, the industry is oriented largely to the production of components for cars, trucks, and airplanes.

In Illinois and Wisconsin . . .

Almost two-thirds of the manufacturing output of Illinois and Wisconsin is produced in Chicago, Milwaukee, and Racine. Chicago,

with its great variety of industries, shows much the same pattern of manufacturing production as the nation. Manufacturing activity in Chicago increased at an average annual rate of 7.6 percent between 1960 and 1966. During that time, Milwaukee manufacturing grew less rapidly than the nation, averaging 5 percent a year while Racine averaged a very rapid 14 percent.

Growth rates of most industries producing durable goods were about the same for Chicago and the nation. However, activity in nonelectrical machinery increased significantly less in the Chicago area. This slower growth primarily reflects the effects of farm machinery and construction equipment, which represents a fourth of Chicago's nonelectrical machine production.

Production of the principal nondurable goods in Chicago increased faster than U. S. production of the same items. Food products, printed materials, and chemicals, which together represent a third of Chicago's manufacturing activity, grew an average 7.2 percent a year, compared with the national average of 5.5 percent. Increased activity in

chemicals accounted for most of Chicago's rapid growth in nondurables.

The slower pace in Milwaukee was largely a reflection of the relatively slow rate of industrial growth in food products and nonelectrical machinery. These two industry groups account for 37 percent of the area's aggregate manufacturing output. Milwaukee's food product industries are associated primarily with brewing, which grew slightly less than 3 percent a year between 1960 and 1966.

During those years, farm and construction equipment accounted for about a third of the production of nonelectrical machinery in Milwaukee. As in the Chicago area, production of this equipment held the pace of activity in nonelectrical machinery well below the national average.

Milwaukee's electrical machinery industry, among the fastest growing industries in the district, grew at an average annual rate of more than 14 percent. This industry accounts for 15 percent of the manufacturing in the Milwaukee area. Much of its growth has been in the manufacture of industrial controls.

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